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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,070	08/27/2001	Jeffrey A. Zapfe	ACENT-004AX	3078
207	7590	10/02/2003	EXAMINER	
WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP TEN POST OFFICE, SQUARE BOSTON, MA 02109			SAN MARTIN, EDGARDO	
		ART UNIT	PAPER NUMBER	
			2837	

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/940,070	ZAPFE, JEFFREY A.	
	Examiner Edgardo San Martin	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 27 August 2001.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-3,5-10 and 12-14 is/are rejected.
- 7) Claim(s) 4 and 11 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 3 and 10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the sound radiating area of the radiation-cancelling device being smaller than the sound radiating area of the vibrating structure, does not reasonably provide enablement for the sound radiating area of the radiation-cancelling device being less than one twentieth the sound radiating area of the vibrating structure. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The Examiner does not find in the Specification any description that would enable a person with ordinary skill in the art to make or use a radiation canceling device having a radiating area of less than one twentieth the sound radiating area of the vibrating structure.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5, 7 – 9, 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Eatwell et al. (US 6,478,110).

With respect to Claims 1 and 8, Eatwell teach a system and method for cancelling noise radiation from a vibrating structure (Fig.7), comprising a vibrating structure (Fig.7, Item 3), the vibrating structure having a sound radiating area; and a radiation-cancelling device (Fig.7, Item 2), the radiation-cancelling device having a sound radiating area (Fig.7, Item 4), wherein the radiation-cancelling device comprises a spring-mass system cooperatively attached to the vibrating structure and wherein, further, the motion of the vibrating structure provides the driving frequency for oscillation of the spring-mass system in said radiation-cancelling device; and the radiation-cancelling device is designed so that the natural frequency of the spring-mass system in the radiation-cancelling device is lower than the vibration frequency of the vibrating structure (Col.9, Lines 14 – 58).

With respect to Claims 2 and 9, Eatwell et al. teaches wherein the sound radiating area of the radiation-cancelling device is smaller than the sound radiating area of the vibrating structure (Fig.7).

With respect to Claims 5 and 12, Eatwell et al. teach wherein the vibrating structure is a transformer (Col.10, Lines 1 – 5).

With respect to Claims 7 and 14, Eatwell et al. teach wherein the spring-mass system of the radiation-cancelling device is in the form of an inverted cup (Fig.7).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eatwell et al. (US 6,478,110) in view of Raquet (US 4,364,594).

Eatwell et al. teach the limitations discussed in the previous rejections, but fail to disclose the vibrating structure being a train wheel.

On the other hand, Raquet teaches a train wheel (Fig.4, Items 9 – 11) comprising a vibration-cancelling device (Fig.4).

It would have been obvious to a person with ordinary skill in the art to employ the Eatwell et al. vibration-cancelling device as the Raquet vibration-cancelling device because it has a low cost and high reliability, can be applied to structures with very high mechanical impedance, allows for cooling and access to the structure, and is easy to install.

***Allowable Subject Matter***

4. Claims 3 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
5. Claims 4 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Noe teaches a resonant device, such as a striker or load generator, Rosenstrom teaches a dynamic reaction reducer for isolated vibratory equipment, Vande Haar teaches a multiple direction vibration absorber, Dykema

teaches a constant spring force mechanism, Kanoi et al. teach a noise-reduction device for stationary induction apparatus, Dykema teaches a dynamic recoil damping mechanism, Holmes teaches a tuned sound barrier, Raquet et al. teach a vibration damped railway wheel, Pasko teaches a resonant sound attenuator for transformers, and Settles et al. teach a vibration absorber for reciprocating tools.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (703) 308-1050. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi can be reached on (703) 308-3370. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Edgardo San Martín  
Patent Examiner  
Art Unit 2837  
Class 181  
September 15, 2003